

REMARKS

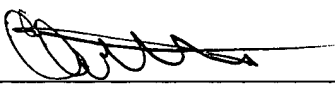
Entry and consideration of the foregoing amendments is respectfully requested.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

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Enclosure: Appendix indicating Amendments

Appendix Showing Amendments to the Claims

38. ~~A haptic feedback stylus device in communication with a host computer running a host application program, the stylus~~An apparatus, comprising:

~~a stylus member physically contacted by a user and configured~~ to be manipulated against a surface ~~by said user, said stylus member and configured~~ to be held ~~between fingers of said~~in a hand of a user;

~~at least one a sensor operative~~configured to send sensor signals to a host computer based on ~~a detect~~said manipulation of said~~the stylus member against said~~the surface and output sensor signals representative of said manipulation to a~~said host computer; and~~

~~an computer-controlled actuator coupled to said~~the stylus member and operativeconfigured to apply a ~~modulated force~~haptic feedback from a ~~tip portion of said~~the stylus member against saidthe surface on which said stylus is manipulated.

39. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~the actuator ~~extends a~~is configured to modify the length of saidthe stylus member by moving said tip portion against said surface.

40. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~further comprising~~ a power source for ~~said actuator is housed~~disposed within ~~said~~the stylus member.

41. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 40, wherein the power source includes a battery.

42. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~the actuator ~~can~~is configured to produce a plurality of force sensations, ~~said~~the plurality of force sensations including a vibration, a jolt, and a texture.

43. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~the actuator includes a voice coil.

44. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~ a tip portion of the stylus member includes a rotatable ball.

45. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 44, wherein ~~said~~ the actuator is ~~a braking actuator that applies~~ configured to apply resistance against ~~said~~ the rotatable ball.

46. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 44, wherein ~~said~~ the actuator is a solenoid.

47. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~ ~~braking~~ the actuator ~~can be pulsed~~ is configured to vibrate at a high frequency ~~to create a passive sensation that feels like a vibration to said user.~~

48. ~~A haptic feedback stylus as recited in~~ The apparatus of claim 38, wherein ~~said~~ the at least one sensor is ~~included~~ disposed within ~~in said~~ the surface ~~that can be contacted by said stylus.~~

49. ~~A haptic feedback interface device in communication with a host computer running a host application program, the interface device~~ An apparatus, comprising:

~~a user manipulatable object physically contacted by a user and to be manipulated by said user, wherein said manipulation of said stylus;~~

~~is detectable by at least one~~ a sensor in communication with ~~at~~ the host computer, the sensor configured to detect a movement of the stylus; and

~~an computer controlled braking~~ actuator coupled to ~~said user manipulatable object and operative to apply~~ the stylus, the stylus configured to vibrate at a high frequency by applying a modulated force on said user manipulatable object, ~~to the stylus wherein said braking actuator is pulsed at a high frequency to create a passive sensation on said user manipulatable object that feels like a vibration to said user as said user maipulatable object is moved by said user.~~

50. ~~A haptic feedback interface device as recited in~~ The apparatus of claim 49, wherein ~~said~~the modulated force is applied to a rotating member of ~~the user manipulatable object~~the stylus.

51. ~~A haptic feedback interface device as recited in~~ The apparatus of claim 50, wherein ~~said~~the rotating member is a rotatable ball against which ~~a portion of said braking member is~~pulsedthe modulated force is applied.

52. ~~A haptic feedback interface device as recited in~~ The apparatus of claim 51, wherein ~~said user manipulatable object is an elongated stylus member~~the stylus is configured to be held between fingers of said user, said stylus member to be manipulated against a surface by said userin a hand.

53. ~~A haptic feedback interface device as recited in~~ The apparatus of claim 52, wherein ~~said~~a tip portion of the stylus includes ~~said~~the rotatable ball, ~~such that said stylus can~~the stylus configured to contact ~~said~~a surface by the rotatable ball of the stylus.

54. ~~A haptic feedback interface device as recited in~~ The apparatus of claim 52, wherein ~~said braking~~the actuator is a solenoid.

55. ~~A method for providing haptic feedback to a user of a haptic feedback interface device in communication with a host computer, the method comprising:~~

~~sensing manipulation of a user manipulatable object physically contacted by a user, wherein said manipulation of said~~ a movement of a stylus to produce a sensed signal ~~is reported to said host computer; and~~

sending a movement signal to a host computer based on the sensed signal; and

applying a modulated force on said user manipulatable object using a computer-controlled braking from an actuator coupled to said user manipulatable object, to the stylus wherein said braking actuator is pulsed at a sufficiently in response to the movement signal, the modulated force being associated with a high-frequency to create a passive sensation on said user

~~manipulatable object that feels like a vibration to said user as said user manipulatable object is moved by said user.~~

56. ~~A~~The method ~~as recited in~~of claim 55, wherein ~~said user manipulatable object is an elongated the stylus member~~is configured to be held between fingers of said user, wherein said stylus member is manipulated in a hand and moved against a surface ~~by said user.~~

57. ~~A~~The method ~~as recited in~~of claim 56, wherein ~~said the stylus member includes a rotatable ball in a tip portion of the stylus member, wherein said braking the actuator applies~~being configured to apply the modulated force to said the rotatable ball while said user moves said tip portion of said the stylus over said is disposed adjacent to the surface.